

FIG. 1

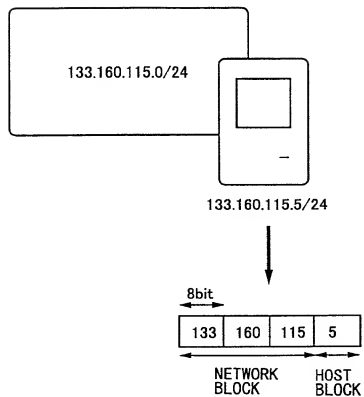


FIG. 2

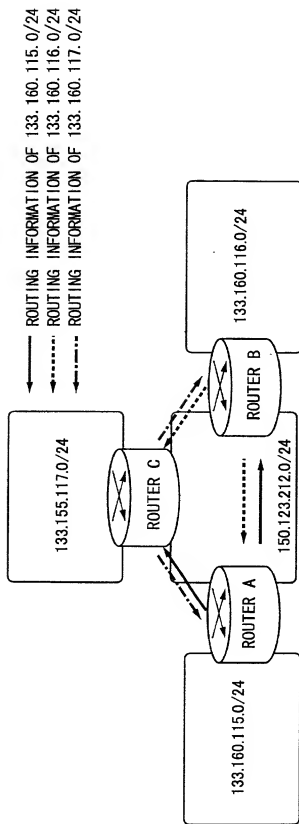


FIG.3

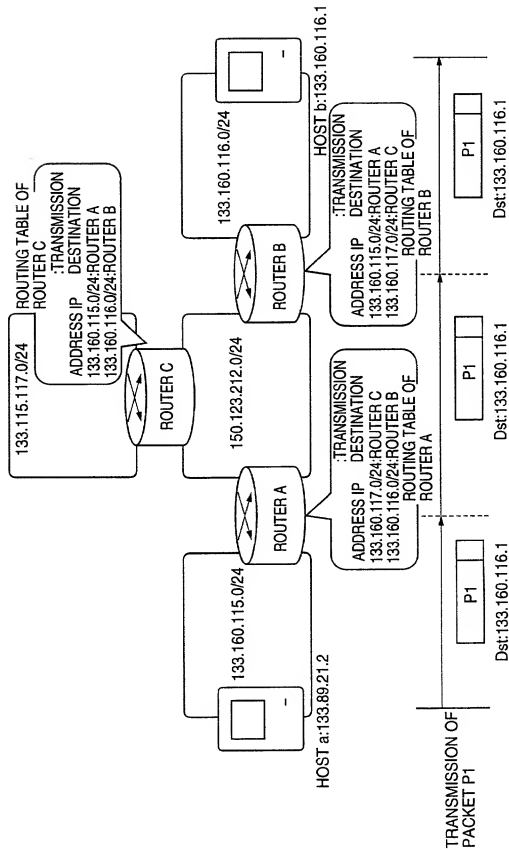


FIG. 4

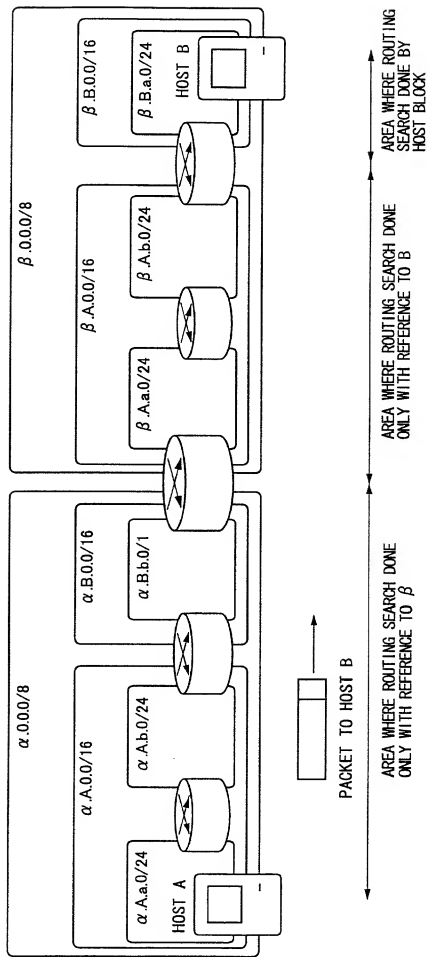


FIG.5

3	13	8	24	16	64 bits
FP	TLA	RES	NLA	SLA	Interface ID
	ID		ID	ID	

001 Format Prefix (3 bit) for Aggregatable Global Unicast Addresss

TLA ID Top-Level Aggregation Identifier

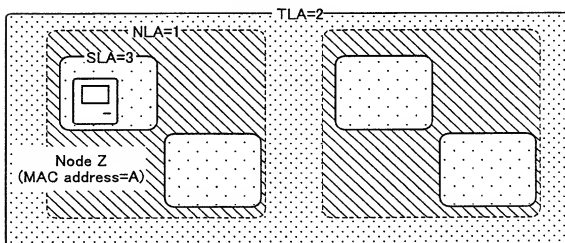
RES Reserved for future use

NLA ID Next-Level Aggregation Identifier

SLA ID Site-Level Aggregation Identifier

INTERFACE ID Interface Identifier

FIG.6



3	13	8	24	16	64 bits
FP	TLA	RES	NLA	SLA	Interface ID
	ID		ID	ID	=A
	=2		=1	=3	

IP ADDRESS OF NODE 2

FIG. 7

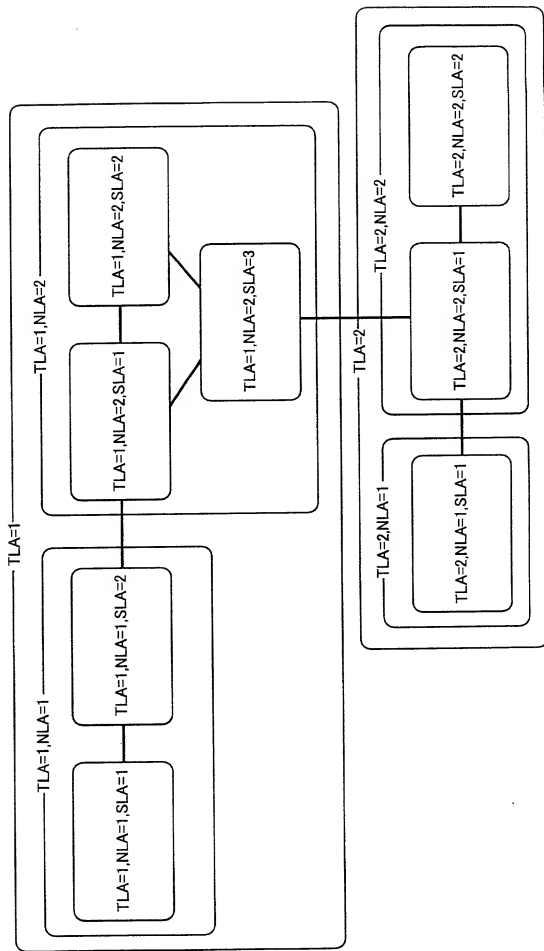


FIG.8

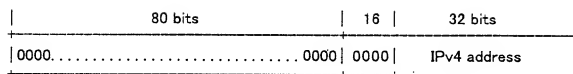


FIG.9

TLA ID= α

NLA ID= β

ROUTING TABLE OF ROUTER A

HIERARCHIAL ROUTING TABLE	
ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER B
SLA ID=4	ROUTER C
SLA ID=1	DIRECT
SLA ID=2	DIRECT
⋮	⋮

CONVENTIONAL ROUTING TABLE	
ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER B
AA.BB.CC.00/24	ROUTER B
SLA ID=3	ROUTER B
AA.BB.DD.00/24	ROUTER C
SLA ID=4	ROUTER C
AA.BB.EE.00/24	ROUTER C
SLA ID=2	DIRECT
SLA ID=1	DIRECT
⋮	⋮

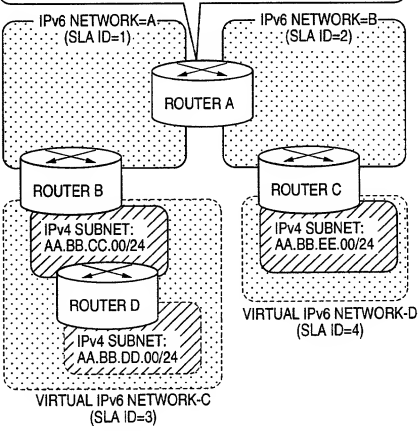


FIG.10

3	13	8	24	16	64 bits
FP	TLA	RES	NLA	SLA	Interface ID
	ID		ID	ID	All 0

IPv6 NETWORK ADDRESS

3	13	8	24	16	64 bits
FP	TLA	RES	NLA	SLA	Interface ID
	ID		ID	ID	32bit=0, AA.BB.CC.0

IPv4 NETWORK ADDRESS

3	13	8	24	16	64 bits
FP	TLA	RES	NLA	SLA	Interface ID
	ID		ID	ID	Layer2 address

IPv6 HOST ADDRESS

FIG.11

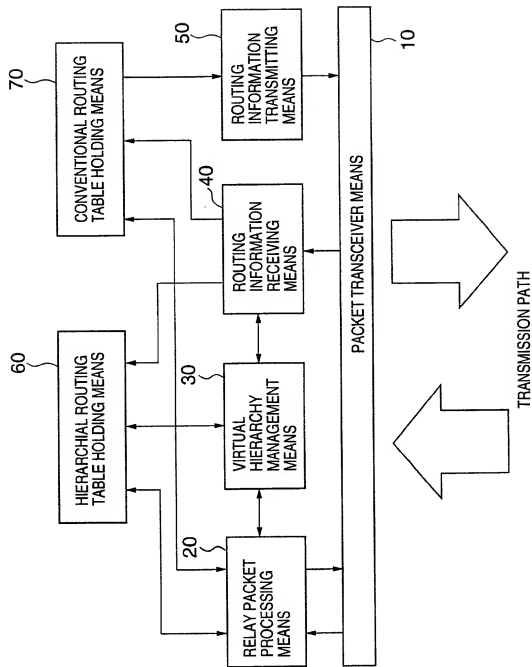


FIG.12

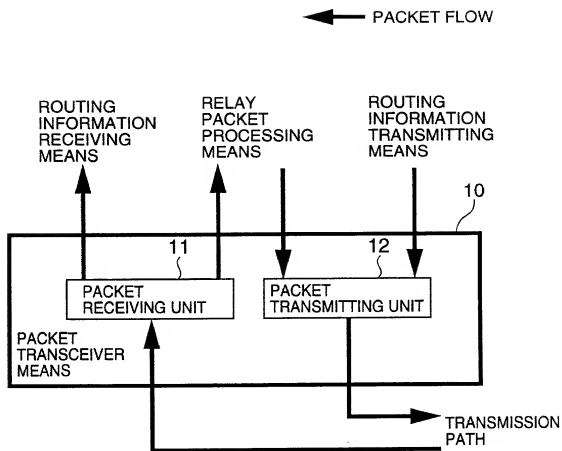


FIG.13

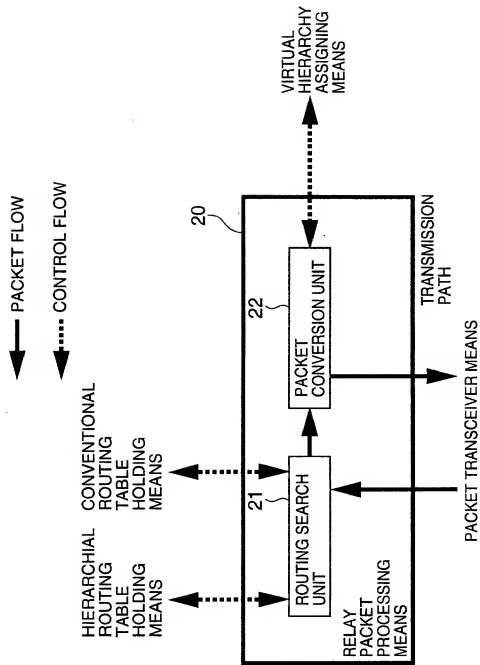


FIG.14

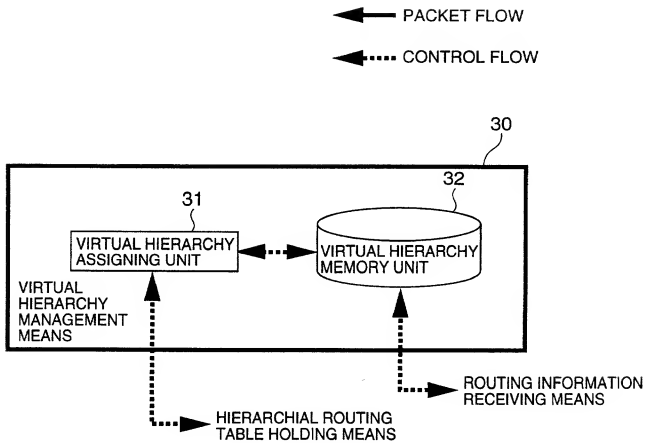


FIG.15

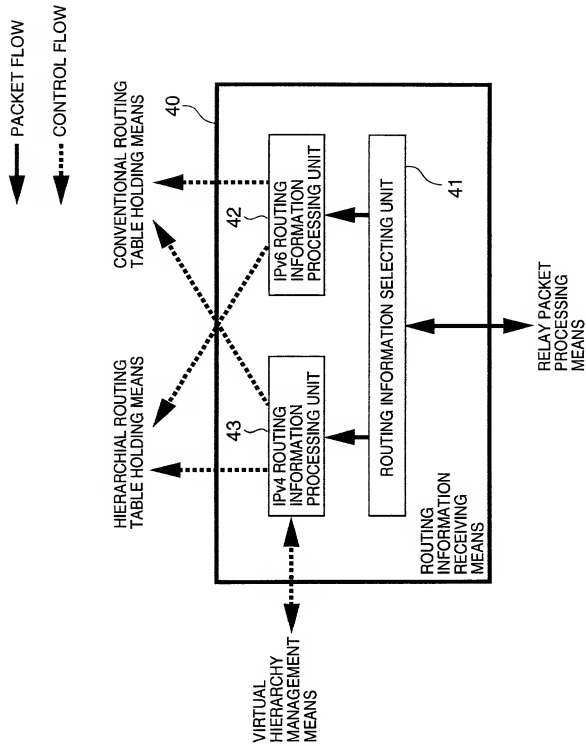


FIG.16

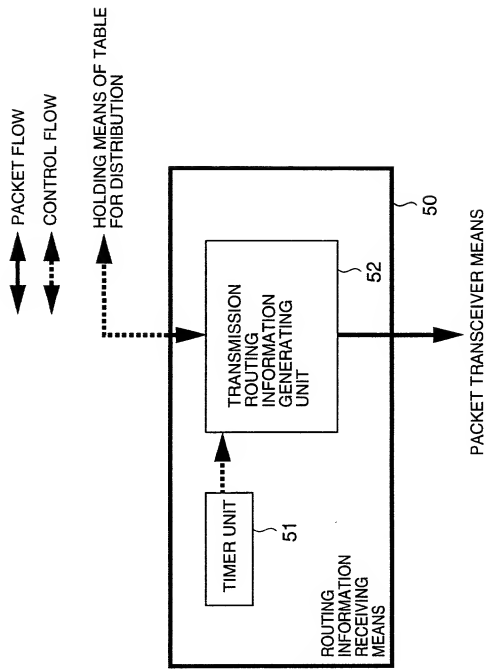


FIG.17

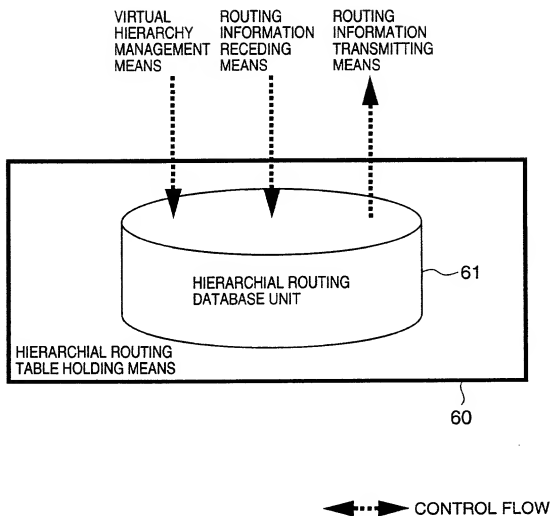


FIG.18

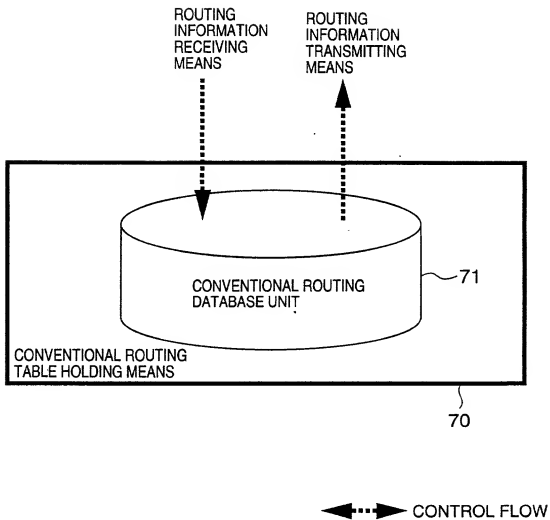


FIG.19

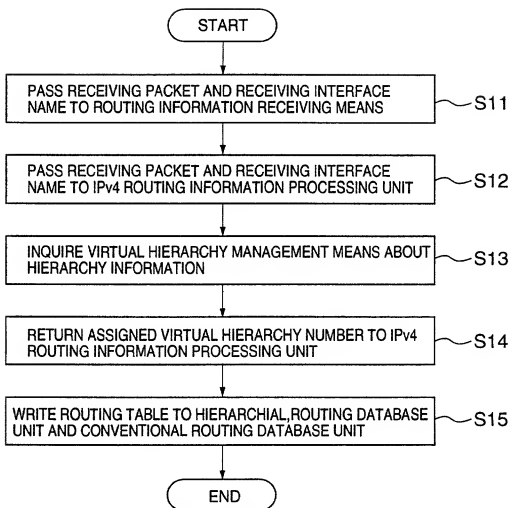


FIG.20

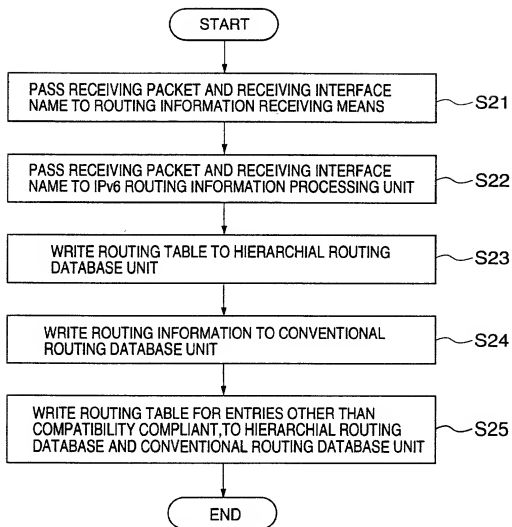


FIG.21

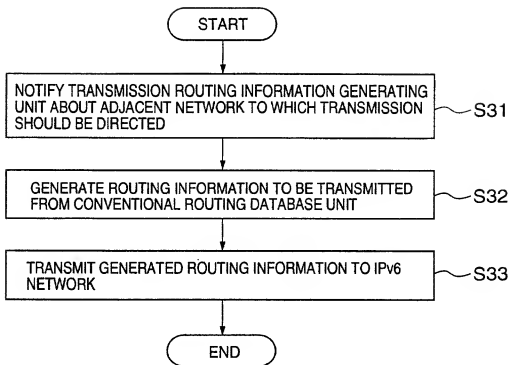


FIG.22

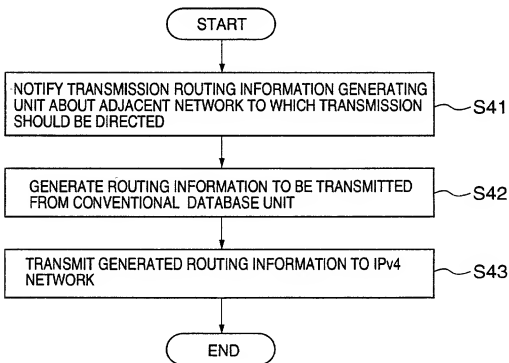


FIG.23

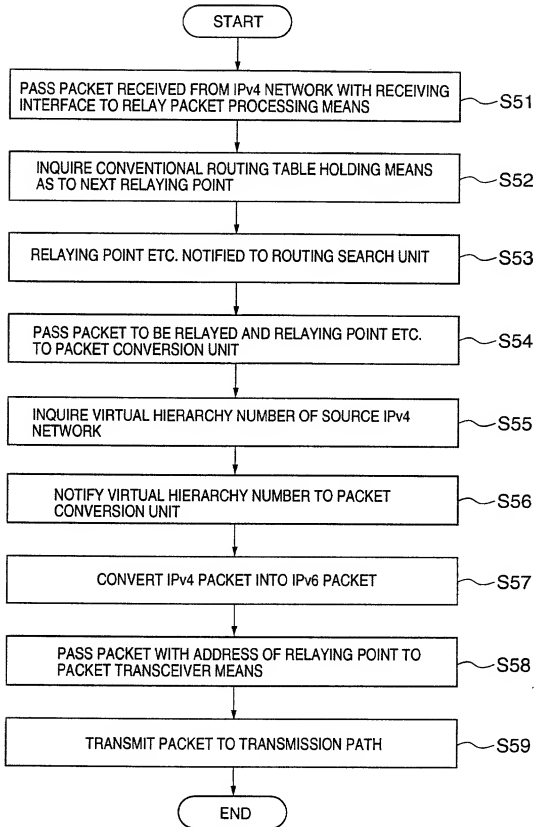


FIG.24

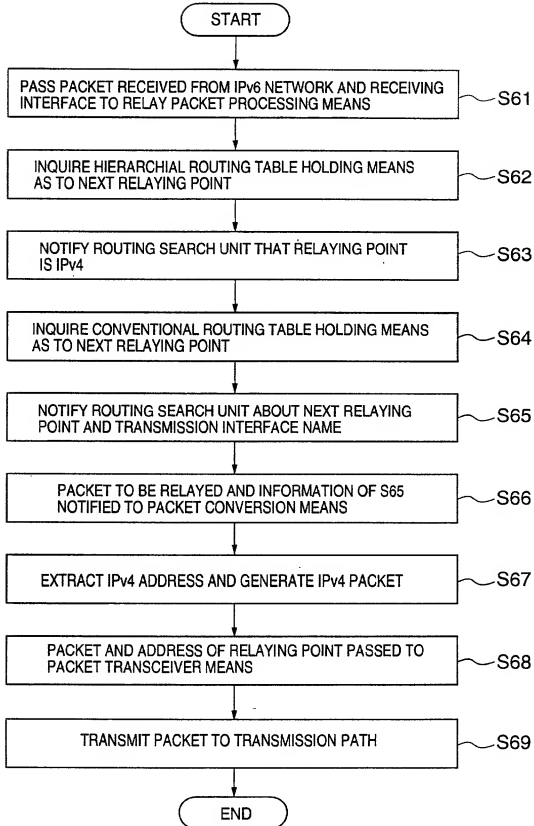


FIG.25

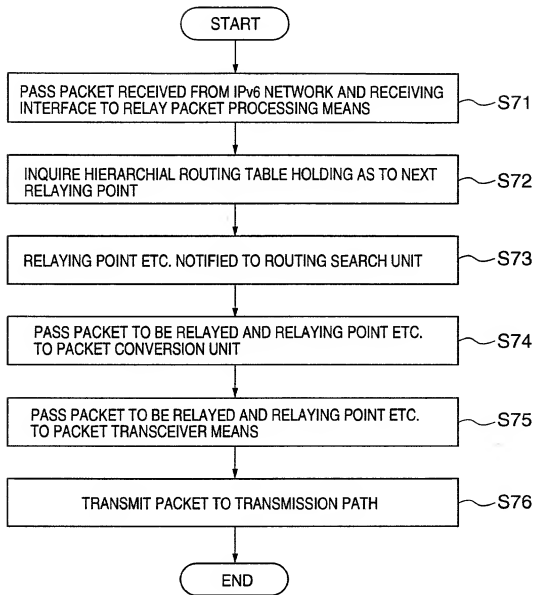


FIG.26

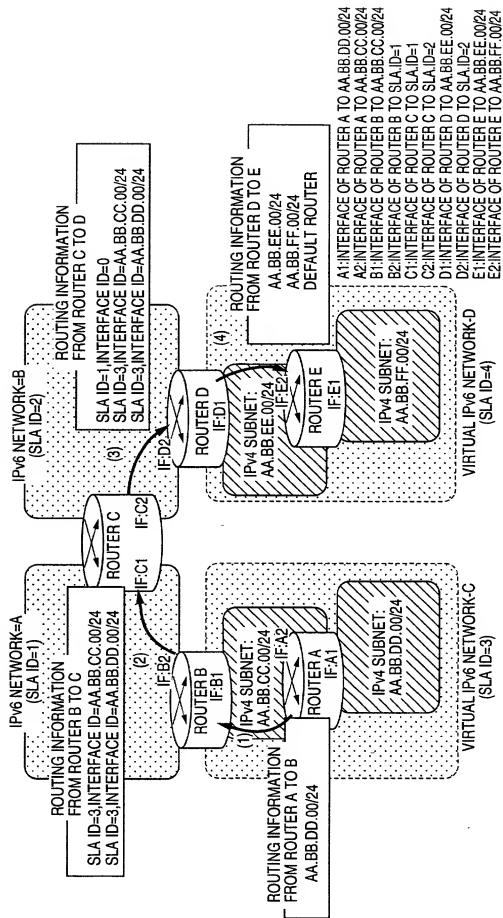


FIG.27

ROUTING TABLE OF ROUTER B

HIERARCHIAL ROUTING TABLE		CONVENTIONAL ROUTING TABLE	
ADDRESS	NEXT ROUTER	ADDRESS	NEXT ROUTER
SLA ID=3	IPv4	SLA ID=3	DIRECT(B1)
SLA ID=1	DIRECT(B2)	AA.BB.CC.00/24	
		SLA ID=3	DIRECT A(B1)
		AA.BB.DD.00/24	
		SLA ID=1	DIRECT (B2)

TRANSMISSION INTERFACE
NAME IN PARENTHESIS

FIG.28

 ROUTING TABLE OF ROUTER C
 
 TABLE GENERATED BASED ON
ROUTING INFORMATION FROM
ROUTER B

HIERARCHIAL ROUTING TABLE		CONVENTIONAL ROUTING TABLE	
ADDRESS	NEXT ROUTER	ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER B(C1)	SLA ID=3	ROUTER B(C1)
SLA ID=1	DIRECT(C1)	AA.BB.CC.00/24	
SLA ID=2	DIRECT(C2)	SLA ID=3	ROUTER B(C1)
		AA.BB.DD.00/24	
		SLA ID=2	DIRECT A(C2)
		SLA ID=1	DIRECT (C1)

TRANSMISSION INTERFACE
NAME IN PARENTHESIS

FIG.29

ROUTING TABLE OF ROUTER D

TABLE GENERATED BASED ON
ROUTING INFORMATION FROM
ROUTER C

HIERARCHIAL ROUTING TABLE	
ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER C(D2)
SLA ID=1	DIRECT C(D2)
SLA ID=2	DIRECT(D2)
SLA ID=4	IPv4(D1)

TRANSMISSION INTERFACE
NAME IN PARENTHESIS

CONVENTIONAL ROUTING TABLE	
ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER C(D2)
AA.BB.CC.00/24	
SLA ID=3	ROUTER C(D2)
AA.BB.DD.00/24	
SLA ID=1	ROUTER C(D2)
SLA ID=2	DIRECT(D2)
SLA ID=4	DIRECT(D1)
AA.BB.EE.00/24	

10075130.021302

FIG.30

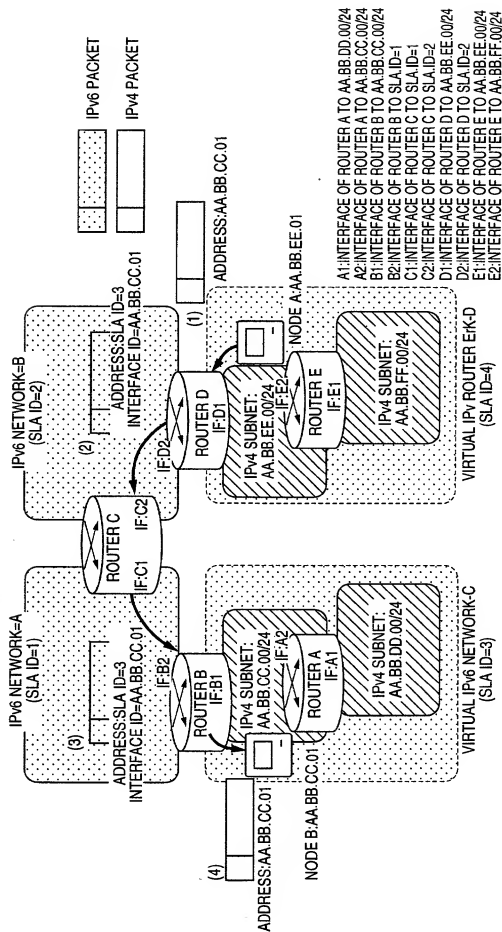


FIG.31

ROUTING TABLE OF ROUTER D



MATCHED ENTRY IN
ROUTING SEARCH

HIERARCHIAL ROUTING TABLE

ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER C(D2)
SLA ID=1	ROUTER C(D2)
SLA ID=2	DIRECT(D2)
SLA ID=4	IPv4(D1)

CONVENTIONAL ROUTING TABLE

ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER C(D2)
AA.BB.CC.00/24	
SLA ID=3	ROUTER C(D2)
AA.BB.DD.00/24	
SLA ID=1	ROUTER C(D2)
SLA ID=2	DIRECT(D2)
SLA ID=4	DIRECT(D1)
AA.BB.EE.00/24	

TRANSMISSION INTERFACE
NAME IN PARENTHESIS

FIG.32

ROUTING TABLE OF ROUTER C

HIERARCHIAL ROUTING TABLE

ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER B(C1)
SLA ID=1	DIRECT(C1)
SLA ID=2	DIRECT(C2)

CONVENTIONAL ROUTING TABLE

ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER B(C1)
AA.BB.CC.00/24	
SLA ID=3	ROUTER B(C1)
AA.BB.DD.00/24	
SLA ID=2	DIRECT(C2)
SLA ID=1	DIRECT(C1)

TRANSMISSION INTERFACE
NAME IN PARENTHESIS

FIG.33

ROUTING TABLE OF ROUTER B

